

Newspaper Clips

April 29, 2012

Hari Bhumi ND 29/04/2012

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चांद पर चलेगा आईआईटी का रोबोट

एजेंसी. कानपुर

आईआईटी कानपुर ने भारतीय इसरो के सहयोग से अत्याधुनिक रोबोट तैयार किया है जो मिशन चंद्रयान-2 के साथ चंद्रमा पर भेजा जाएगा। इन्फ्रारेड कैमरे के माध्यम से रोबोट को विशेष विजन दिया गया है। वह देखने में सक्षम है इसलिए चंद्रमा पर चहलकदमी के दौरान पत्थर से टकराने या फिर गीली मिट्टी में फँसने की समस्या नहीं आएगी। यह किसी भी तरह का मोड़ व बाधा पार करने में सक्षम है। यह रोबोट चंद्रमा की



सतह के फोटोग्राफ भेजेगा, जिसका अध्ययन करके चंद्रमा पर जनजीवन, पानी होने की सटीक जानकारी मिल सकेगी। रोबोट की मदद से चंद्रमा पर हीलियम,

चंद्रयान-2 के साथ जाएगा

इसरो प्रमुख के श्वाकृष्णन के उस बयान से आईआईटी कानपुर के वैज्ञानिक उत्साहित हैं, जिसमें उन्होंने कहा है कि अब मिशन चंद्रयान-2 की तैयारी की जाएगी। चंद्रयान-2 के साथ आईआईटी का रोबोट भी जाएगा।

प्रिटानियम, आयरन के तत्व भी खोजे जा सकते हैं, क्योंकि चंद्रयान-1 में इसके बड़े भंडार के संकेत मिले हैं। यदि हीलियम का बड़ा स्रोत मिला तो भविष्य के बिजली संकट से

आकलन रिपोर्ट भेजेगा

आईआईटी के मेकेनिकल इंजीनियरिंग विभाग के प्रो. आशीष दत्ता व केएस वैकटेश ने इसे बनाया है। इनका कहना है कि यह रोबोट मैपिंग करने में सक्षम है। यह पानी, पत्थर, मिट्टी की आकलन रिपोर्ट भेजेगा।

निपटा जा सकेगा। अनुमान के तौर पर कहा जा सकता है कि 25 टन हीलियम से भारत, अमेरिका, जापान सरीखे देश में एक साल तक बिजली की आपूर्ति की जा सकती है।

IITian is Global TV Industry's New Disruptive Innovator

Basketball-loving, Steve Jobs-adoring Anand Subramanian wants to change the way you watch television. And Silicon Valley moneybags seems to agree



By **Asif Ismail** | Washington, DC

Perfecting the technology to stream video content across all platforms – and viewable from anywhere – has been the Holy Grail of the television industry for years. From industry behemoths, such as Time Warner and Comcast, to a number of startups, all have tried to advance the concept and knowhow of “TV Everywhere” without any genuine success.

But now an IIT graduate appears to have beaten everyone out of the gate.

Last Monday, the New York-based NimbleTV, founded by Anand Subramanian, who left Mumbai for the United States a decade and a half ago, started beta testing such a platform that allows subscribers to access TV content from anywhere on any device.

Simply put, what NimbleTV is doing is

uploading television packages that you have subscribed to – from any distributor anywhere – in the cloud and letting you watch them from any corner of earth through high-speed internet.

No Platform Ticket

The new technology is especially good news for peripatetic television junkies, who will be able to watch their favourite shows on mobile platforms and iPads, and even on the television sets in their hotel rooms. NimbleTV, which will be launched later this summer, also allows consumers to record shows without any restrictions.

How Revolutionary Is NimbleTV?

“This is probably the biggest thing to have happened to TV in a long time,” Subramanian said by phone from New York on Wednesday.

“[The] biggest thing in TV since the flat screen,” a company post on its Facebook page claimed.

Many, including those who know a thing or two about innovations, seem to agree.

“It is potentially game-changing,” journalist Perri Peltz, said on Friday, honouring Subramanian with the prestigious Tribeca Disruptive Innovation Award at the NYU Stern School of Business, barely four days after NimbleTV began the beta test.

The award recognises the contributions of disruptive innovators in the fields of business, technology, arts and entertainment. Subramanian’s fellow honorees on Friday included pop superstar Justin Bieber and Twitter founder Jack Dorsey.

The company says the new technology is born of the twin ideas that consumers “should be able to access the TV they pay for wherever they happen to be” and “that providers and content producers should be paid”. In that sense, the product is “a solution that is both industry friendly and consumer friendly,” Subramanian said.

“‘TV Everywhere’ as a concept has been there for a long time, but it is not a reality,” Subramanian explained how he reached his Eureka moment. “The question that intrigued me is why that is the case. So when I started digging into it, I saw that it is an industry problem. And started thinking about how to solve it.”

Subramanian said the industry has responded very positively so far. “Cable companies all over the world have contacted us,” he said without going into specifics.

The Cable Guy

The response from consumers was also overwhelming, according to Subramanian. “Our server had to be beefed up because we had so many people signing up,” he said. “So we were a little unplanned for this kind of volume of people. People are interested all over the world.”

One of NimbleTV’s early investors is media giant Tribune, which owns a number of television stations across the US.

A serial entrepreneur, Subramanian’s maiden venture was in India. After graduating from IIT Bombay in 1992, he founded a medical software firm in the city.

He came to the US in the mid-1990s, after selling that company. And in the next few years, he would launch two more companies: iGate Capital, an IT consulting firm, and ContextWeb, an online ad company, which became a big success.

Before stepping down as CEO of ContextWeb in 2010 to found the latest venture, the company was named as one of the top 500 fastest growing technology firms by Deloitte for four straight years. In 2008, he was a finalist for The Metro New York Ernst & Young Entrepreneur of the Year award.

Ball Games

Not unlike many entrepreneurs of his generation, one of Subramanian’s idols is the legendary Steve Jobs, whom he met in India during his IIT days more than two decades ago. “I was really fortunate to have had the opportunity to spend 20 minutes with him,” he said of his meeting with the late Apple founder.

Subramanian, who constantly speaks on the issues of technology, media and their convergence, said he loves to help and mentor other entrepreneurs. “I am a very, very active person when it comes to entrepreneurship,” he said. “Let’s put it this way, my life and my work are the same, to a large extent.”

Two other interests in his life are travel and sports, especially basketball and American football. Asked whether he follows any Indian sports, such as cricket, he said that he had played a lot of cricket in Mumbai. “But it is hard for me to follow cricket here,” he says.

And that may change now, thanks to his new product, which will make it easier for him, and millions of others, to follow cricket and other pastimes from back home on any device. ■

Deccan Herald ND
29.04.12 P-13

IIT Madras, Wipro ink MoU

CHENNAI, DHNS: To enhance technology education, teaching and research in the country, the Indian Institute of Technology (IIT) Madras on Friday signed an MoU with Wipro Limited.

The MoU is with 'Mission 10X', a not-for-profit trust launched by Wipro, bringing together the internationally reputed IIT and a leading IT organization diversifying into 'Education Technology'.

The MoU would help synergise the individual strengths of both the organisations to meet the growing needs of "enhancement of the teaching learning process and Research in Engineering Education at the National level," IIT-M said.

Dainik Bhasker ND 29/04/2012 P-1

केंद्र की योजना

छात्रों को विदेशी संस्थानों की तर्ज पर कई तरह से आर्थिक मदद देने की तैयारी

अब उच्च शिक्षा में आड़े नहीं आएगा पैसा !

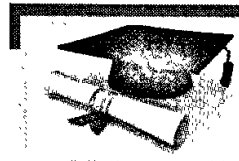
पंकज कुमार पांडेय, नई दिल्ली

केंद्र सरकार ऐसे छात्रों के लिए मदद का हाथ बढ़ाने की तैयारी में है, जो पैसे की वजह से उच्च शिक्षा की ओर रुख नहीं कर पाते। 12वीं योजना के लिए केंद्र सरकार ने मांग आधारित फाइनेंसिंग की बहुउद्देश्यीय योजना तैयार की है। इसके तहत छात्रों की जरूरत के आधार पर उनकी आर्थिक मदद की जाएगी। इसमें 20 फीसदी छात्रों को ऋण, करीब 4 लाख छात्रों को स्कॉलरशिप और 10 लाख छात्रों को शिक्षण शुल्क से मुक्ति देकर मदद की जाएगी। करीब 50 फीसदी छात्रों को अलग-अलग तरीके से मांग आधारित फाइनेंसिंग सिस्टम के दायरे में लाने की मंशा जताई गई है।

ब्रिटेन, ऑस्ट्रेलिया सहित दुनिया के श्रेष्ठ संस्थानों के फाइनेंसिंग मॉडल के आधार पर देश के संस्थानों से छात्रों को वित्तीय सहायता देने को

कहा जाएगा। मानव संसाधन विकास मंत्रालय छात्रों के लिए अहम इन योजनाओं को अमल में लाने के लिए वित्त मंत्रालय और योजना आयोग से पैरवी कर रहा है।

मंत्रालय की 12वीं योजना के लिए तैयार एक रिपोर्ट में कहा गया है कि करीब 21 फीसदी छात्र वित्तीय दिक्कतों की वजह से सेकेंडरी के बाद अपनी पढ़ाई आगे नहीं बढ़ा पाते। विशेषज्ञों की राय के आधार पर रिपोर्ट में कहा गया है कि मांग आधारित फाइनेंसिंग जरूरी है। इसके बिना इनरोलमेंट के तय लक्ष्य को पूरा नहीं किया जा सकता है। मंत्रालय वित्त मंत्रालय और आयोग पर लगातार इस प्रस्ताव को स्वीकार करने के लिए दबाव बना रहा है। संस्थानों को बैंकों से कर्ज लेने में सक्षम बनाने के लिए भी रास्ते तलाशे जा रहे हैं। यूके और ऑस्ट्रेलिया की तर्ज पर प्राइवेट फाइनेंसिंग इनीशिएटिव का प्रस्ताव है।



ऐसे दी जाएगी मदद

करीब दस लाख छात्रों को वोकेशनल अप्रेंटिसशिप के जरिए उच्च शिक्षा से जोड़ा जाएगा। 20 फीसदी छात्रों को लोन देने की योजना है। 4 लाख छात्रों को केंद्र व राज्य मिलकर स्कॉलरशिप या मुफ्त शिक्षा के दायरे में लाया जाएगा। 24 हजार नई फेलोशिप दी जाएगी।

अपनाएंगे दुनिया का श्रेष्ठ मॉडल

रिपोर्ट के मुताबिक विश्वविद्यालयों को दुनिया के श्रेष्ठ विश्वविद्यालयों का मॉडल अपनाने को कहा जाएगा। जहां संस्थान छात्रों की सभी वित्तीय जरूरतों का इंतजाम करते हैं। इन विश्वविद्यालयों में दाखिला के लिए योग्यता और मेरिट ही एकमात्र जरिया है। मंत्रालय ऐसे इन्वेंचिव फाइनेंसिंग मॉडल तलाशने के पक्ष में है जिससे छात्रों को पूरी या आंशिक फीस की छूट मिले।

प्राइवेट फाइनेंसिंग पर भी जोर

करीब 80 फीसदी तकनीकी व प्रोफेशन कोर्सेज प्राइवेट सेक्टर संचालित करते हैं। नेशनल एजुकेशन फाइनेंस कॉर्पोरेशन बनाकर छात्रों को रीफाइनेंसिंग सुविधा मुहैया कराने की योजना बनाई गई थी। योजना आयोग ने अभी इसको सहमति नहीं दी है।

Indian Express ND 29/04/2012 P-2

Poor transparency in AIEEE a concern

More than 12 lakh candidates to take entrance test today

SHYAMLAL YADAV
NEW DELHI | APRIL 28

AS MORE than 12 lakh students prepare to take this offline test on April 29, the All India Engineering Entrance Examination (AIEEE) conducted by the Central Board of Secondary Education (CBSE) continues to remain opaque.

The other high-profile test for entrance to IITs and other premier institutes, IIT-JEE, on the other hand, has become more transparent, not least because of the intervention of the courts and the Central Information Commission. Cut-off procedure, aggregate cut-off marks and question papers of IIT-JEE are available online for public scrutiny, answer

Issue	IN 2006		FOR 2012 EXAM	
	AIEEE	IIT JEE	AIEEE	IIT JEE
Cut-off Procedure	Not Available	Secret	Not Available	Available
Aggregate cut-off marks	Could be worked out	Secret	Could be worked out	Available
Question paper provided to candidates after the exam	Yes	No	Yes	Yes
ORS tampering	Can't be tampered	Possible	Can't be tampered	Can't be tampered
ORS copy provided for self-evaluation	No	No	No	Yes
Publish ORS after evaluation	No	No	No	Not Known. (Yes in 2011)
Admission counseling	On-line	Secret	On-line	Partly open

keys are released after 30 days of the test and candidates are provided with carbon copies of their Optical Response Sheets for self-evaluation.

These reforms, most of which have come in the past two years, have brought transparency to IIT-JEE, which was

as opaque, if not worse, as AIEEE in 2006 (See table).

"There is general direction of transparency in the entrance exams. We directed the CBSE last year to put answer sheets of candidates on the website as done by IIT-JEE last year but CBSE was unable to

do so due to some server-related problems. This year they will do so," said HRD Minister Kapil Sibal.

This poor level of transparency is not limited to AIEEE. The other high-profile test conducted by the CBSE, the All India Pre-Medical Test-

for which 2.5 lakh candidates appeared in the preliminary exam and the final test is scheduled for May 13 - fares no better. And now, the CBSE has been entrusted to conduct the single medical entrance examination, the National Eligibility Entrance Test (NEET-UG), under the supervision of the Medical Council of India (MCI) as directed by the Supreme Court.

It would also conduct the Single Engineering Entrance Examination (SEEE), in coordination with IITs, from next year. "We don't supervise the medical exam, so would not comment but for the SEEE, when it starts from next year, we will ensure the existing transparency system of IIT-JEE is enforced," Sibal said.

The AIEEE was started in 2002 as the single entrance test to all Central engineering institutes excluding IITs, and for Centrally-allocated seats in state colleges.

Hindustan Times ND 29/04/2012

P-2

DUTA protests new B Tech course

HT Correspondent

■ htreporters@hindustantimes.com

NEW DELHI: The Delhi University Teacher's Association (DUTA) has opposed the manner in which the vice-chancellor announced proposal to start a four-year B Tech degree in Humanities on Friday.

"The Vice-Chancellor has unilaterally announced major academic changes and new programmes. A change can become

The system is being overhauled with a vision to commodify education.

DUTA
In a statement on Saturday

a reform for a system only if it is first identified as an organic need and then brought in through debate and discussion. We wish to highlight that till date there has been no

debate or discussion on the four year undergraduate programme, the concept of Meta University or 'B.Tech' in Humanities in any statutory body - be it Staff Council, Committee of Courses, or Faculties," DUTA said in a statement.

The members of DUTA added that the overhaul of the university was being carried out with a vision to commercialise and commodify education.

Times of India ND 29/04/2012 p-4

DU undergraduate courses may take 4 years from 2013

TIMES NEWS NETWORK

New Delhi: Delhi University's undergraduate courses may undergo a sea change from 2013. Another year will be added to the existing three-year undergraduate courses — BA, BCom and BSc — and the courses will be restructured to offer an exit option midway, with an alternative to rejoin later and complete the course.

Students will also have the option of knocking off one or two papers and instead use credits earned through sports or other extracurricular activities to finish the courses. What's more, students can earn three degrees through this four-year programme.

"We propose to launch the four-year courses from the 2013-14 session. It will be a transdisciplinary course with multiple exit options. As we are simultaneously re-vamping our open learning system, undergraduate students at colleges will be allowed to complete a semester through open learning and the credits will be counted," said DU vice-chancellor Dinesh Singh.

According to DU administration, the blueprint is ready and consultations with teach-



FLEXIBLE COURSES: The programme will offer students two exit options during a course — at the end of second and third years

ers and other stakeholders are on. The administration also plans to bring the proposal up for discussion at a teachers' congress in June. "After taking teachers' input, the plan will be put up at a teachers' congress. Finally, the proposal will be placed before the academic and executive councils of DU," said Singh.

The programme will offer students two exit options during the course — at the end of second and third years. If a student decides to opt out of the course after completion of the first two years, he/she will get an associate degree. At the

end of third year, the student can opt out with a bachelor's degree. If the student completes four years, an honours degree will be awarded.

"Even the two-year associate degree will be embedded with enough training to enable a student to become an elementary teacher. Students who opt out after completing second and third years will get 10 years to return and complete the course," said Singh.

"In future, we would like to offer credits to students travelling in the Gyan Uday Express and doing projects," Singh added.

स्टूडेंट्स के लिए तरस रहा एमबीए

एसईई में 36 हजार सीटों के लिए 10 हजार ने दी परीक्षा, एक लाख से ज्यादा सीटें खाली रहने की आशंका

● अमित त्यागी

नोएडा। कुछ साल पहले तक मोटे पैकेज के लिए पसंदीदा एमबीए कोर्स से अब युवाओं का मोह भंग हो रहा है। इसका सबूत है उत्तर प्रदेश की प्रवेश परीक्षा। प्रदेश में 36 हजार सीटों पर मात्र 10 हजार छात्रों ने ही एमबीए के लिए प्रवेश परीक्षा दी है। राष्ट्रीय स्तर पर भी इस साल एमबीए में एक लाख से ज्यादा सीटें खाली रहने की आशंका है।

उच्च शिक्षा में एमबीए बुरे दौर से गुजर रहा है। ग्रेजुएट मैनेजमेंट एडमिशन काउंसिल (जीमैक) के मुताबिक, फुलटाइम एमबीए के आवेदन में 67 फीसदी की गिरावट आई है। महाराष्ट्र, गुजरात, कर्नाटक और यूपी जैसे राज्यों में सीटें खाली पड़ी हैं। यह एमबीए की दुर्गति का ही असर है कि इस साल आईआईटी को अपना ज्वाइंट मैनेजमेंट एंट्रेंस टेस्ट (जेमैट) और फेकल्टी ऑफ मैनेजमेंट स्टडीज (एफएसएस-डीयू) को अपनी प्रवेश परीक्षा समाप्त करनी पड़ी।

इनके साथ ही डेढ़ दर्जन राष्ट्रीय संस्थानों के दाखिले इस साल कैंट से हुए, लेकिन आवेदन एक फीसदी भी नहीं बढ़े, बल्कि और

प्रदेश में ऐसे गिरा एमबीए का ग्राफ

यूपी में एमबीए के लिए 2009 में 42 हजार 526 छात्र प्रवेश परीक्षा में बैठे। 2010 में ये संख्या घटकर 31 हजार 536 रह गई। 2011 में छात्र संख्या और गिरकर 22 हजार 918 रह गई और इस साल सिर्फ 10 हजार छात्रों ने प्रवेश परीक्षा दी है। दूसरी ओर, एमबीए की सीटें 2009 में 14 हजार से बढ़कर 2012 में 36 हजार हो गई हैं।

कम हो गए। एमबीए से बेरुखी का सिलसिला यहीं खत्म नहीं होता। ऑल इंडिया काउंसिल फॉर टेक्निकल एजुकेशन के पहले कॉमन मैनेजमेंट एडमिशन टेस्ट (सीमैट) से देश भर के 1900 कॉलेजों में दाखिले के लिए सिर्फ 70 हजार आवेदन आए। दूसरी ओर, राज्य प्रवेश परीक्षा के तहत उत्तर प्रदेश में 400 मैनेजमेंट कॉलेजों की 36 हजार सीटों पर सिर्फ 10 हजार छात्रों ने प्रवेश परीक्षा दी है। ये हालात तब हैं, जब यूपी में इस साल मैनेजमेंट कोटा खत्म कर दिया गया है।



आईआईएम कैंट में भी गिरावट

आईआईएम में सीटें बढ़ने के बाद भी कैंट में आवेदन घट रहे हैं। कैंट-2009 में दो लाख 76 हजार, 2010 में दो लाख 42 हजार, 2010 में दो लाख 6 हजार और 2011 में दो लाख 4 हजार छात्र शामिल हुए। इस साल आवेदन में भी गिरावट तब हुई, जबकि आईआईटी, एनआईटी, डीयू-बीएचयू के प्रबंधन विभाग और कई राज्य विवि समेत डेढ़ दर्जन राष्ट्रीय संस्थानों के दाखिले कैंट से हुए हैं।

रुझान कम होने के कारण

- वैश्विक अर्थव्यवस्था में गिरावट से रोजगार में कमी
- एमबीए कॉलेजों की भारी भरकम फीस
- नई कॉलेज खुलने के साथ सीटों का बढ़ जाना
- डिमांड और सप्लाई के बीच भारी अंतर होना
- फुलटाइम से स्थान पर एगजीक्यूटिव एमबीए का चयन
- स्नातक के बाद सीधे सर्विस सेक्टर में है ज्यादा मौके
- पाठ्यक्रम में बाजार के मुताबिक बदलाव न होना
- उद्योग के मुताबिक टैलेंट न आने से प्लेसमेंट कम होना

खत्म हुआ मैनेजर बनने का हाइप

एमबीए करने के बाद मैनेजर बनने का हाइप अब खत्म हो गया है। छात्र ग्रेजुएशन के बाद सीधे सर्विस सेक्टर में नौकरी को महत्व दे रहे हैं। अर्थव्यवस्था की गिरावट से रोजगार कम हुए हैं। प्रबंधन शिक्षा में जिस बदलाव की जरूरत है, वो नहीं हो पा रहा है।
- प्रोफेसर एसके काक, कुलपति, महामाया टेक्निकल यूनिवर्सिटी

कैंट में भी गिरावट

एमबीए दाखिले की कमी का असर बड़े संस्थानों पर भी है। विकास दर कम होने का असर रोजगार पर पड़ा है। बाजार में जाँब कम हैं। संस्थानों की बढ़ती तादाद और शिक्षकों की गुणवत्ता कम होने से रोजगार क्षमता प्रभावित हुई है। कोर्स की बढ़ती फीस भी एक बड़ा कारण है।- प्रो. प्रेमव्रत, आईआईटी रुड़की के संस्थापक निदेशक व यूपीटीयू के पूर्व कुलपति

Publication: The Times Of India Delhi; Date: Apr 29, 2012; Section: All That Matters; Page: 12;

Future of war: flying robots that can spy and kill too

COMBAT ZONE

MANMOHAN BHADUR



Imagine being at the receiving end of a missile that is targeting 'bad guys' lazing in the sun in the AfPak region, or a ride in a vehicle in Yemen ending in annihilation, courtesy a missile from a Predator drone. It sounds like retribution from the heavens, except that it is a purely human endeavour. The west is determinedly

moving towards this type of warfare built around, what the Americans call, remote split operations. It's in our interest that we assimilate the implications of this trend in war fighting, which looks like the use of the mythical weapon Vajra by Indra.

Remote split operations are unique — an unmanned aerial vehicle (UAV) could be flying anywhere in the globe while being controlled by a pilot sitting in an air-conditioned room in America. After assuming controls of the UAV, he could be firing a missile to kill a terrorist as part of his task for the day. Once his shift ends, the UAV pilot would return home and maybe, take his family out for dinner! This is not science fiction but an act being played out daily.

'UAV' is a household word; the Americans fielded 5000 UAVs of all types in Iraq and Afghanistan (up from 200 in the 1991 Gulf War). And the plans are grandiose. US Air Force's vision document 'Unmanned aircraft systems (UAS) flight plan 2009-2047' charges it 'to harness increasingly automated, modular, globally connected and sustainable multi-mission unmanned systems resulting in a leaner more adaptable and efficient air force.' The attributes of persistence, endurance, efficiency and connectivity, which are inherent in a drone and are potent force multipliers, will be used to overcome human limitations and revolutionize war fighting.

The UAS developmental plan involves harnessing net centrality that the West has perfected, and having unmanned aircraft available worldwide, ready to be directed to a conflict zone by pilots sitting at home bases. With evolutionary progress in harnessing artificial intelligence, the UASs would be infused with the power to take combat decisions. They would engage in combat to support other manned aircraft or carry weapons to increase fire power availability. The final step would be the use of this technological asymmetry to put the adversary off-balance and, as the UAS flight plan document says, bring about a "...revolution in the roles of humans in air warfare."

Where does that place the notion of sovereignty of a state? In Libya last year, Security Council Resolution 1973 mandated protection of civilians, "...while excluding a



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NOT A TOY File photo of a US soldier launching a UAV called the Raven to get an aerial view of the area, near Baghdad, Iraq

foreign occupation force of any form..." — implying no foreign troops on ground. However, Apache helicopters fired their missiles from not more than five to eight km from Muammar Gaddafi's troops. Does it imply that, just because they were not actually touching the ground, the sanctity of the UN mandate was upheld? And say, the same scenario repeats itself two decades from now — would the utilization, then, of UASs with offensive capabilities not be in violation of a non-interference resolution of the Security Council ala the Libyan UNSCR 1973, just because there would be no humans on board? Possibly, a 'human' would need to be redefined!

High casualty sensitivity in the western society is driving the robotisation of machines of war. Besides UAS, we would have unmanned ground vehicles capable of kinetic actions on the battlefield. This robotisation has brought in questions of the moral and ethical kind, as such asymmetry in technological progress, where one's own troops are absolutely safe while engaged in mortal combat, would bring in arrogance of power. The asymmetry would be a critical handicap for the less technologically endowed states, making them vulnerable to unilateralism and violation of their sovereignty. While India is no pushover, it is imperative that one acknowledges the existence and repercussions of this asymmetry and works to a plan which would demand accelerated indigenous military technological research and development and close integration of all elements of national power, especially diplomatic and economic.

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